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| 10/034,970 | 12/27/2001 | Russell Dean Kosel | 13DV-14061 | 2112 |

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EXAMINER

VERDIER, CHRISTOPHER M

| ART UNIT | PAPER NUMBER |
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3745

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,970

Applicant(s)

KOSEL ET AL.

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the alignment fixture (claim 2) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "146".

The drawings are objected to because in figure 4, the lead line for diameter "166" should correspond to outer diameter of the second body portion of the first sleeve and should not include portions of the second sleeve. See the specification, paragraph 23 for the terminology related to diameter 166.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: Appropriate correction is required.

In paragraph 3, line 5, "Overtime" should be changed to -- Over time --.

In paragraph 18, line 4, "plastic" should be changed to -- plastically --.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 7, which recites that the second sleeve extends from at least one of (emphasis added) the first and second sidewalls, has no antecedent basis in the specification.

Claim 8, which recites that at least (emphasis added) a portion of the first sleeve is radially inward from the second sleeve, has no antecedent basis in the specification.

Claim 11, which recites that the second sleeve extends from at least one of (emphasis added) the first and second sidewalls, has no antecedent basis in the specification.

Claim 12, which recites that the second sleeve diameter is approximately equal to the assembly opening diameter, has no antecedent basis in the specification.

Claim 16, which recites that the second sleeve extends from at least one of (emphasis added) the first and second sidewalls, has no antecedent basis in the specification.

Claim 17, which recites that the second sleeve diameter is approximately equal to the first sleeve diameter, with the second sleeve diameter being approximately equal to the diameter of the first and second sidewall openings, has no antecedent basis in the specification.

Examiner's Suggestions to Claim Language

The following are suggestions to improve the clarity and precision of the claims:

In claim 1, line 3, -- a strut having -- may be inserted after "including" in order to provide antecedent basis for the strut sidewalls recited in line 8.

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In claim 6, line 2, "a" may be changed to -- the --.

In claim 8, line 2, "a" may be changed to -- the --.

In claim 9, line 2, "a" may be changed to -- the --.

In claim 10, line 2, "a" may be changed to -- the --.

In claim 12, line 2, "a" may be changed to -- the --.

Claim Objections

Claims 1-12 and 14-20 are objected to because of the following informalities:

Appropriate correction is required.

In claim 1, line 1, "expandible" should be changed to -- expandable --.

In claim 1, line 7, "expandible" should be changed to -- expandable --.

In claim 10, line 4, -- to -- should be inserted after "equal".

In claim 12, line 3, -- to -- should be inserted after "equal".

In claim 14, line 2, -- is -- should be inserted after "sleeve" (first occurrence).

In claim 15, line 2, "concentrically aligned a" should be changed to -- a concentrically aligned --.

In claim 17, line 2, -- to -- should be inserted after "equal".

In claim 17, line 3, -- to -- should be inserted after "equal".

In claim 18, line 2, -- is -- should be inserted before "smaller".

In claim 20, line 2, -- is -- should be inserted after "end".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9, 11-12, and 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7, which recites that the second sleeve extends from at least one of (emphasis added) the first and second sidewalls, is inaccurate and is not possible. This includes the scenario that the second sleeve extends from both the first and second sidewalls, but as seen in figure 4, if the second sleeve 142 were to extend from both sidewalls as is claimed, there would be no room for the first sleeve 140 and the assembly of the first and second sleeve would not be possible. It is suggested that "at least" be deleted. Claim 8, which recites that at least (emphasis added) a portion of the first sleeve is radially inward from the second sleeve, is inaccurate and is not possible. This includes the scenario that all of the first sleeve 140 is radially inward from the second sleeve 142, but as seen in figure 4, if the second sleeve 142 were to extend from both sidewalls as is claimed, there would be no room for the first sleeve 140 and the assembly of the first and second sleeve would not be possible. It is suggested that "at least" be deleted. In claim 11, the recitation of the second sleeve extending from at least one of (emphasis added) the first and second sidewalls, is inaccurate and is not possible for the same reason with regard to claim 7. It is suggested that "at least" be deleted. Claim 16, which recites that the second sleeve extending from at least one of

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(emphasis added) the first and second sidewalls, is inaccurate and is not possible for the same reason with regard to claim 7. It is suggested that "at least" be deleted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-6, 10, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers 4,993,918 in view of United Kingdom Patent 472,329. Meyers discloses a method for installing an expandable stiffener (rivet), comprising providing an assembly 33 including a first sidewall 26 and a second sidewall 28, connected at a leading edge 38 and an unnumbered trailing edge such that a cavity (unnumbered, near 16) is defined therebetween, forming an

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opening 74 extending through the first and second sidewall, and inserting a first radially expandable stiffener (rivet) through the assembly opening such that the sleeve extends between the first and second sidewalls, and coupling the stiffener to the first and second sidewalls. The assembly is in the form of a strut for a gas turbine engine, and inherently increases fatigue life of the strut, by securely fastening the first and second sidewalls to one another, thereby preventing movement between the first and second sidewalls. However, the stiffener (rivet), although radially expandable, is not a sleeve, but rather a rivet. In addition, Meyers does not disclose that radially expanding the stiffener comprises drawing a mandrel through the sleeve to secure the sleeve to the sidewalls, with the drawing comprising drawing the mandrel from a first end of the sleeve and through a second end of the sleeve, with the sleeve having a diameter approximately equal to the diameter of the assembly opening, and a second portion having a smaller diameter than the assembly diameter opening, with the sleeve being concentrically aligned with a second sleeve.

United Kingdom Patent 472,329 (figures 1-3) shows a rivet assembly, whereby two sidewalls f, g are joined to one another, via a sleeve a, which is radially expanded by drawing a mandrel e through the sleeve a to secure the sleeve to the sidewalls f, g, with the drawing comprising drawing the mandrel e from a first end h of the sleeve and through a second end b of the sleeve, with the sleeve having a diameter approximately equal to a diameter of an unnumbered assembly opening, and a second portion (the inside diameter of the end near h) having a smaller diameter than the assembly diameter opening, with the sleeve a being

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concentrically aligned with a second sleeve d, for the purpose of providing strong shear resistance and providing a secure manner of attachment of the sidewalls together.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to replace the rivet of the strut of Meyers with a sleeve such that the sleeve is attached by drawing a mandrel through the sleeve to secure the sleeve to the sidewalls, with the drawing comprising drawing the mandrel from a first end of the sleeve and through a second end of the sleeve, with the sleeve having a diameter approximately equal to the diameter of the assembly opening, and a second portion having a smaller diameter than the assembly diameter opening, with the sleeve being concentrically aligned with a second sleeve, as taught by United Kingdom Patent 472,329, for the purpose of providing strong shear resistance and providing a secure manner of attachment of the sidewalls together.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers 4,993,918 and United Kingdom Patent 472,329 as applied to claim 1 above, and further in view of Gutnik 4,815,193. The modified strut/stiffener of Meyers shows all of the claimed subject matter except for using an alignment fixture to ensure that the first and second sidewall openings are concentrically aligned.

Gutnik shows an alignment fixture 16 which is used with sheets 10, 12, 14, which have a hole drilled therethrough, which are then riveted together, for the purpose of ensuring that the holes are concentric.

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It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified strut/stiffener of Meyers such that it utilizes an alignment fixture for the assembly, as taught by Gutnik, for the purpose of ensuring that the holes through the sidewalls are concentric.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Watson and Von Benken are cited to show damped turbine engine struts.

German Patent 2,319,221 and Martin are cited to show expandable rivets.

Allowable Subject Matter

Claims 7-9, 11-12, and 16-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (703)-308-2638. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (703) 308-1044. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

C.V.
December 24, 2003



Christopher Verdier
Primary Examiner
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